

RULES AND REGULATIONS
GOVERNING THE
SUBDIVISION OF LAND
IN
SHREWSBURY, MASSACHUSETTS

ADOPTED BY THE SHREWSBURY PLANNING BOARD

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RULES AND REGULATIONS
GOVERNING THE SUBDIVISION OF LAND IN
SHREWSBURY, MASSACHUSETTS

(Adopted under the Subdivision Control Law
Sections 81-K to 81-GG inclusive, Chapter 41, G. L.)

PURPOSE

"The subdivision control law has been enacted for the purpose of protecting the safety, convenience and welfare of the inhabitants of the cities and towns in which it is, or may hereafter be, put in effect by regulating the laying out and construction of ways in subdivisions providing access to the several lots therein, but which have not become public ways, and ensuring sanitary conditions in subdivisions and in proper cases parks and open areas. The powers of a planning board and of a board of appeal under the subdivision control law shall be exercised with due regard for the provision of adequate access to all of the lots in a subdivision by ways that will be safe and convenient for travel; for lessening congestion in such ways and in the adjacent public ways; for reducing danger to life and limb in the operation of motor vehicles; for securing safety in the case of fire, flood, panic and other emergencies; for insuring compliance with the applicable zoning ordinances of bylaws; for securing adequate provision for water, sewerage, drainage, underground utility services, fire, police and other similar municipal equipment, and street lighting and other requirements where necessary in a subdivision; and for coordinating the ways in a subdivision with each other and with the public ways in the city or town in which it is located and with the ways in the neighboring subdivisions. It is the intent of the subdivision control law that any subdivision plan filed with the planning board shall receive the approval of such board if said plan conforms to the recommendations of the board of health and to the reasonable rules and regulations of the planning board pertaining to subdivision of land; provided, however, that such board may, when appropriate, waive, as provided, for in Section 81-R, such portions of the rules and regulations as is deemed advisable."

SECTION I.

AUTHORITY

Under the authority vested in the Planning Board of the Town of Shrewsbury by Section 81-Q of Chapter 4I of the General Laws said Board hereby adopts these rules and regulations governing the subdivision of land in the Town of Shrewsbury. Such rules and regulations shall be effective on and after April 30, 1973; amending such rules and regulations effective April 15, 1954 including all amendments thereto.

SECTION II.

GENERAL

A. Definitions:

Applicant - Either the owner of the land stated in the application for subdivision or all the owners where title is held jointly, in common, or in tenancy by the entirety, including corporations. An agent, representative, or his assigns may act for an owner, provided written evidence of such fact is submitted. Evidence in the form of a list of their officers and designated authority to sign legal documents shall be required for a corporation.

Board - The Planning Board of the Town of Shrewsbury

Definitive Plan (Plan) - The plan of a subdivision as submitted (with appropriate application) to the Board for approval, to be recorded in the Registry of Deeds or filed with the Land Court when approved by the Board, and such plan when approved and recorded; all as distinguished from a preliminary plan.

Developer - A person (hereinafter defined) who develops under a plan of a subdivision approved under Section III C of these Rules and Regulations.

Easement - A right acquired by public authority or other person to use or control property for a utility or other designated public purpose.

Engineer - Any person who is registered or otherwise legally authorized by the State of Massachusetts to perform professional civil engineering services.

General Laws - (abbreviated G. L.) The General Laws of Massachusetts. In case of a rearrangement of the General Laws, any citation of particular sections of the General Laws shall be applicable to the corresponding sections in the new codification.

Owner - As applied to real estate, the person holding the ultimate fee simple title to a parcel, tract or lot of land, as shown by the record in the appropriate Land Registration Office, Registry of Deeds or Registry of Probate.

Person - An individual, or two or more individuals, or a group or association of individuals, a partnership or a corporation having common or undivided interests in a tract of land.

Roadway - That portion of a way which is designated and constructed for vehicular travel.

Right-of-Way - That land dedicated for public use within which will be located the roadway, sidewalks, grass plots and utilities which will serve the subdivision.

Street - A public or private way either shown on a plan approved in accordance with the subdivision control law, or otherwise qualifying a lot for frontage under the subdivision control law.

Street, Major - A street which, in the opinion of the Board is being used or will be used as a thoroughfare within the Town of Shrewsbury or which will otherwise carry a heavy volume of traffic.

Street, Minor - A street which, in the opinion of the Board is being used or will be used primarily to provide access to abutting lots and which will not be used for through traffic.

Street, Secondary - A street intercepting one (1) or more minor streets and which, in the opinion of the Board, is used or will be used to carry a substantial volume of traffic from such minor street(s) to a major street or community facility, and normally including a principal entrance street of a large subdivision, or group of subdivisions and any principal circulation street within such subdivision.

Subdivider - A person who follows the procedures under Section III to procure approval under said section with respect to a tract of land.

Subdivision - The division of a tract of land into two or more lots including re-subdivision, and, when appropriate to the context, relating to the process of subdivision of the land or territory subdivided; provided, however, that a division of a tract of land into two or more lots shall not be deemed to constitute a subdivision within the meaning of the Subdivision Control Law, if, at the time when it is made, every lot within the tract so divided has frontage on:

1. A public way, or a way which the Town Clerk certifies is maintained and used as a public way, or;
2. A way shown on a plan previously approved and endorsed in accordance with the Subdivision Control Law, or;
3. A way in existence when the Subdivision Control Law became effective in the Town of Shrewsbury having, in the opinion of the Board, sufficient width, suitable grades, and adequate construction to provide for the needs of vehicular traffic in relation to the proposed use of the land abutting thereon or served thereby, and for the installation of municipal services to serve such land and the buildings erected or to be erected thereon. Such frontage shall be of at least such distance as is then required by zoning or other bylaw, if any, for erection of a building on such lot. Conveyances or other instruments adding to, taking away from, or changing the size and shape of lots in such a manner as not to leave any lot so affected without the frontage above set forth, or the division of a tract of land on which two or more buildings were standing when the Subdivision Control Law went into effect in the Town of Shrewsbury into separate lots on each of which one of such buildings remains standing, shall not constitute a subdivision.

Subdivision Control Law - Refers to Sections 81-K to 81-GG, inclusive, of Chapter 41 of the General Laws of the Commonwealth of Massachusetts, entitled "Subdivision Control."

Surveyor - Any person who is registered or otherwise legally authorized by the State of Massachusetts to perform land surveying services.

Town - Town of Shrewsbury, Massachusetts

B. Subdivision

No person shall make a subdivision within the meaning of the Subdivision Control Law of any land within the Town, or proceed with the improvement or sale of lots in a subdivision, or the construction of ways, or the installation of municipal services therein, unless and until a Definitive Plan of such subdivision has been submitted and approved by the Board as hereinafter provided.

C. Limitation of One Dwelling on Any Lot - Residential Zones

Not more than one building designed or available for use for dwelling purpose shall be erected or placed or converted to use as such on any lot in a subdivision, or elsewhere in the Town without the consent of the Board. Such consent may be conditional upon the providing of adequate ways furnishing access to each site for such building, in the same manner as otherwise required for lots within a subdivision.

D. Variation in Building Designs

Developers shall vary the exterior design of buildings in subdivisions to avoid a monotonous appearance.

E. Multiple Structures on One Lot - Apartment Zones

Developers may locate more than one (1) structure on a lot in apartment districts insofar as they are separated by at least 50 feet.

SECTION III

PROCEDURE FOR THE SUBMISSION AND APPROVAL OF PLANSA. Plan Believed Not to Require Approval

Any person who wishes to cause to be recorded in the Registry of Deeds or to be filed with the Land Court a plan of land and who believes that his plan does not require approval under the Subdivision Control Law may submit his original plan with three (3) prints thereof together with two (2) application Form A's (See Appendix) and a \$150.00 + \$50/lot filing fee to the Town Clerk (Adopted 1/7/99) accompanied by the necessary evidence to show that the plan does not require approval. Or, if delivered to the Board, said person shall file, by delivery or registered mail, a notice with the Town Clerk stating the date of submission for such determination and accompanied by a copy of said application. If the notice is given by delivery, the Town Clerk shall, if requested, give a written receipt therefor.

If the Board determines that the plan does not require approval, it shall without a public hearing and without unnecessary delay endorse on the plan the words "Approval Under the Subdivision Control Law not Required."

The Board may add to such endorsement a statement of the reason approval is not required. The plan will be returned to the applicant, and the Board shall notify the Town Clerk of its action.

If the Board determines that the plan does require approval under the Subdivision Control Law, it will so inform the applicant and return the plan. The Board will also notify the Town Clerk of its action.

If the Board fails to act upon a plan submitted under this section as provided for in M.G.L. Chapter 41, s. 81-P, it shall be deemed to have determined that approval under the Subdivision Control Law is not required.

- 1) Plan Contents. The Plan shall be legibly drawn at a scale of one inch equals forty feet and contain the following:
 - a. Identification of the plan by name of owner of record of land in question, the scale, north arrow and date.
 - b. The statement "Approval Under Subdivision Control Law Not Required" and sufficient space for the date and signature(s) of the Board.
 - c. Zoning classification and location of any zoning district boundaries that may lie with the locus of the plan. The Assessor's map, block and lot numbers shall be shown.
 - d. Notice of any proceedings and copies of decisions by the Zoning Board of Appeals, including but not limited to Special Permits and Variances, regarding the land or any buildings thereon.
 - e. In the case of the creation of a new lot, the remaining land area and frontage of the land in the ownership of the applicant shall be shown.
 - f. Names and status of public or private street(s) and easements to include the construction materials of the street(s), the width of the layout of the street or easement.
 - g. Location of all existing buildings, including setbacks on the land under consideration.

- h. Location of all bounds on land under consideration.
 - i. All plans shall be annotated above the signature block with the following statement:
“Planning Board endorsement is not a determination as to conformance with the Zoning Bylaw.”
 - j. A copy of the ANR plan shall be submitted digitally on CD Rom in accordance with
“The Engineering Department Requirements for Digital Submittals” as amended from time to time.
- 2) The Applicant shall file the approved plan at the Registry of Deeds and shall notify the Board by presenting written evidence of recording of said plan documents within six (6) months of approval.

B. Preliminary Plan

A preliminary plan of a subdivision may be submitted by the applicant to the Board for discussion and approval. The Board may submit said plan to the Board of Health and other municipal agencies for discussion and review. The submission of such a preliminary plan will enable to subdivider, the Board, the Board of Health, other municipal agencies and owners of property abutting the subdivision to discuss and clarify the problems of such subdivisions before a definitive plan is prepared. Therefore, it is strongly recommended that a preliminary plan be filed in every case.

1. General

Any person submitting a Preliminary Plan of a subdivision to the Board for approval shall file with the Board the following:

- a. Ten (10) contact prints, darkline on white background and a transparent reproduction thereof.
- b. A properly executed application Form B (See Appendix A in duplicate).
- c. Filing Fee in accordance with the current “Town of Shrewsbury Planning Board Filing Fees”
- d. Names of all abutters within three hundred (300) feet of the subdivision as they appear on the most recent tax list and proof that the applicant has properly notified all abutters by certified mailing at least seven days prior to the public hearing.
- e. In addition to those items required to be submitted, it is requested that the following be furnished:
 - i) A locus plan of the subdivision, showing its street configuration in relation to the surrounding area within one thousand six hundred (1,600) feet of the perimeter of the subdivision and to zoning district boundaries, at a scale of one (1) inch equals eight hundred (800) feet.
 - ii) In the case of a subdivision covering less than all of the land owned by the subdivider in the area of the subdivision, a plan showing in a general manner that proposed overall development of all of said land.
 - iii) Preliminary findings, in a general way, of the environmental analysis, if expected to be required.

- f. Eight (8) copies of prints, eight and one-half by eleven (8-1/2 x 11) inches, or another suitable size, showing an outline of the subdivision showing all ways and lots, street names, lot numbers and street numbers.

Filings shall be made through the Town Clerk's Office by delivery or registered mail. Dating shall be that noted upon receipt in the Town Clerk's Office. (Adopted 3/5/81).

2. Contents

The preliminary plan of a proposed subdivision or re-subdivision of land shall be drawn on tracing paper, showing:

- a. The subdivision name, boundaries, north point, date, scale (1"=40'), legend and title "Preliminary Plan."
- b. The names of the record owner and the applicant, and the name of the designer, engineer or surveyor.
- c. The names of all abutters, as determined from the most recent local tax list.
- d. The existing and proposed lines of streets, ways, easements and any public areas within the subdivision in a general manner.
- e. The proposed system of drainage including adjacent existing natural waterways, in a general manner, proposed water, sewer and other underground utilities.
- f. The approximate boundary lines of proposed lots, with approximate areas and dimensions.
- g. The names, approximate location and widths of adjacent streets, adjacent structures and physical features such as fences, pools, etc.
- h. And the topography of the land at a contour interval of two (2) feet and the approximate location of any wetlands (as defined by MGL C.131, S.40) to include all abutting parcels within 100 feet. Elevations shall be referred to mean sea level.
- i. Profiles for proposed streets shall be submitted at a scale of 1"=40' horizontal and 1"=4' vertical.
- j. A pencil on paper plan at a scale of 1"=100' showing all the streets, lots and exterior property lines of the proposed subdivision. This plan shall again be submitted with the evolved definitive plan showing all changes.
- k. Plans shall be stamped by a professional engineer or professional land surveyor as appropriate.

3. Action By Board

Requests for waivers from the Planning Board regulations shall be submitted with the preliminary plan and either stated on the plan or contained in a separate instrument attached thereto and referred to on said plan.

The Board may give such preliminary plan its approval with or without modification. Such approval does not constitute approval of a subdivision but does facilitate the procedure in securing approval of the definitive plan.

The Board may also disapprove the plan. A disapproval will be accompanied by a detailed statement of reasons for the action.

Notice of its action must be given by the Board to the applicant and the Town Clerk as provided for in M.G.L. Chapter 41 s. 81-S. Failure to act within that time shall be considered as approval of the preliminary plan.

4. Site and Field Inspection

In order to facilitate site inspection by the Planning Board and field inspection and review of the site of the proposed subdivision, there shall be temporary staking or flagging along the center line of all proposed roads in the subdivision, or if that is not practical, an alternative method enabling on-site review.

C. Definitive Plan

1. General

Any person who submits a definitive plan of a subdivision to the Board for approval shall file with the Board the following:

- a. An original drawing of the definitive plan, ten (10) contact prints thereof (darkline on white background) and one (1) set of transparent reproductions thereof.
- b. A properly executed application Form C (See appendix) in duplicate with attachments.
- c. Filing Fee in accordance with the current "Town of Shrewsbury Planning Board Filing Fees"
- d. Release and Inspection Fees shall be in accordance with the current "Town of Shrewsbury Planning Board Filing Fees". This sum shall be due and payable prior to release (Adopted 1/7/99). The applicant shall file, by delivery of registered mail, a notice with the Town Clerk stating the date of submission for such approval accompanied by a copy of the completed application (Form C).
- e. A clear Certificate of Municipal Lien shall be provided with all definitive subdivisions.
- f. A copy of the Definitive plans shall be submitted digitally on CD Rom in accordance with "The Engineering Department Requirements for Digital Submittals" as amended from time to time.

2. Contents

The definitive plan shall be prepared by a registered professional engineer and registered professional land surveyor project design team and shall be clearly and legibly drawn in black India ink upon mylar and shall be prepared utilizing the most current release of AutoCAD or another Town-approved drawing package. The plan shall be at a scale of 1"=40' or other scale as the Board may accept to show details clearly and adequately. Sheet sizes shall be 24"x 36". If multiple sheets are used, they shall show each lot in its entirety on one (1) sheet and they shall be accompanied by an index sheet showing the entire subdivision at a scale of one (1) inch equals two hundred (200) feet. The index sheet shall correlate to match lines shown on individual sheets. The definitive plan shall contain the following information:

- a. Subdivision name, boundaries, north point, date and scale.
- b. Name and address of record owner, subdivider and engineer or surveyor.
- c. Names of all abutters as they appear in the most recent tax list.
- d. Lines of existing and proposed streets, ways, lots, easements and public or common areas within the subdivision. The proposed names of proposed streets shall be shown in pencil until they have been approved by the Board.
- e. Sufficient data to determine the location, direction and length of every street and way line, lot line and boundary line and to establish these lines on the ground.
- f. The location of all permanent monuments properly identified as to whether existing or proposed, sidewalks, driveway aprons, trees and grass plots, fire hydrants and existing streetlights shall be shown on horizontal plans.
- g. Location, names and present widths of streets bounding, approaching or within reasonable proximity of the subdivision.
- h. Identification of purpose of easements.
- i. Suitable space to record the action of the Board and the signature of the members of the Board or officially authorized person.

Items j, k, and i may be submitted on the same sheet as the definitive plan or on separate sheets.

- j. Existing and proposed topography at a suitable contour interval as required by the Board.
- k. Existing profiles on the exterior lines and proposed profile on the centerline of proposed streets at a horizontal scale of 1"=40' and vertical scale of 1"=4'. All elevations shall refer to the U.S.C. & G.S. datum, mean sea level.
- l. Proposed layout of storm drainage, gas, water supply, underground electrical distribution and sewage disposal systems.

- m. Location of natural waterways and water bodies within and adjacent to the subdivision.
- n. Major site features, such as existing stone walls, fences, buildings, large trees, rock ridges and out-croppings, and swamps.
- o. Where sanitary sewers are not available, the result of percolation tests and the level of the water table each lot proposed within the subdivision. The tests shall be executed in accordance with Title 5 of the Massachusetts State Environmental Code and the regulations of the town Board of Health. (Adopted March 7, 1985)
- p. The development plan shall show: a development plan of the premises showing adjoining land within three hundred (300) feet of the property line; topography at two-foot intervals; graphic drainage analysis, including distinction between upland and wetland (as defined by MGL C.131, §40); location of tree cover, ledge outcroppings; outstanding individual tree of 10-inch diameter or greater within fifty (50) feet of the right-of-way; location of proposed trees, large boulders, existing structures, including fences and wall; sill elevations and; proposed lot lines. If located within the Floodplain District, the location of the base flood elevation (one hundred year flood) shall be indicated. Wetlands delineation shall be based upon field identification and flagging by a botanist qualified for wetlands identification under the Wetlands Protection Act. It is recommended that the wetlands identification be done in coordination with the Conservation Commission.
- q. A stormwater management plan indicating both on-site and off-site contributory areas, including calculations for the sizing of drainage pipes in accordance with Section V(H). The stormwater management and drainage calculations shall be prepared and signed by a registered professional engineer and be filed as part of the definitive plan. The stormwater management plan shall be drawn to scale and showing the incremental areas contributing to each catch basin, ditch or watercourse, including contributory areas outside of the subdivision. The stormwater management plan shall also show existing and proposed contours as required above.
- r. An overlay at the same scale as the definitive plan, showing the Soil Conservation Service interpretation of suitability for on-site sewage effluent disposal or showing United States Geological Survey surficial geology, or both except for areas proposed to be served by town sewerage.
- s. Where connection to the public water system is not proposed, information indicating why such connection is not feasible, description of provisions to be made for water for fire fighting and information regarding potable water quality and quantity shall be submitted.
- t. A comprehensive erosion and sedimentation control plan indicating the erosion control measures to be employed, including a description of locations of temporary stockpiles, spoil areas, temporary drainage systems, slope stabilization techniques and sediment basins and a narrative description of how erosion from individual lots onto streets and into drainage systems is proposed to be controlled.

- u. A locus plan of the subdivision showing its street configuration in relation to surrounding streets within one thousand six hundred (1,600) feet of the perimeter of the subdivision and to zoning district boundaries, at one (1) inch equals eight hundred (800) feet.
- v. Eight (8) copies of prints, eight and one-half by eleven (8 ½ by 11) inches, or another suitable size, showing an outline of the subdivision showing all ways and lots, street names, lot numbers, street numbers, easements, utilities, the limit of wetlands, and the 100 year flood plain.
- w. An environmental analysis, as required by these Rules and Regulations.
- x. Sight distance computations shall be provided for review.
- y. The lengths and bearings of all subdivision lot lines, including lot frontages on the streets.
- z. A Traffic Impact Assessment, as required by these Rules and Regulations.

3. Environmental Analysis

An environmental impact analysis shall be submitted for any subdivision allowing ten (10) or more residential dwelling units or 10,000 square feet or more of commercial and industrial development. The analysis shall be prepared by an interdisciplinary team, to include a civil engineer, landscape architect and wetland biologist/scientist. The Planning Board will require that the scope of such analysis include as many suggestions as would identify the best approach providing for the public benefit in the areas of environmental impact listed below:

- a. Impact upon ground and surface water quality and level, including estimated phosphate and nitrate loading on groundwater and surface water from septic tanks, lawn fertilizer, toxic wastes, storage of petroleum products and other activities within the department. For all developments located in whole or in part within the Aquifer Protection Overlay District, this shall include analysis of open and closed drainage system alternatives, examining effects upon the basic water budget and upon the speed of transport of contaminants.
- b. Material effects upon important wildlife habitats, outstanding botanical features and scenic or historic environs.
- c. Capability of soils, vegetative cover and proposed erosion control efforts to support proposed development without danger or erosion, silting or other instability.
- d. Relationship to the requirements of M.G.L.A. C. 131§ 40 and 40A and the Wetlands Protection Act.
- e. Impact upon the existing water supply and distribution systems and well capacity of the town.
- f. Pretreatment of waste materials considered by the Massachusetts Department of Environmental Protection to be hazardous to the public, including but not limited to the proper containment and handling of petrochemical substances.

4. Traffic Impact Assessment

A traffic impact assessment shall be submitted for any subdivision allowing ten (10) or more residential dwelling units or 10,000 square feet or more of commercial and industrial development or if for good cause the Planning Board requests an assessment to be conducted. The following guidelines identify the general information to be included in the Traffic Impact Assessment submitted to the Town of Shrewsbury Planning Board. Particular projects may warrant that additional information also be included.

- A. Project Description. The applicant shall submit a brief description of the proposed project and study area. Prior to the start of the study, written approval from the Planning Board approving the limits of the study area shall be obtained.
- B. Existing Conditions.
 1. Provide physical characteristics, including jurisdictional responsibilities, of each roadway within the study area;
 2. Traffic volumes shall be examined covering the study area. Average weekday volumes shall be shown for 24 hours and the AM and PM peak hours in all cases;
 3. Relative accident data for the most recent years available shall be included to identify problem locations;
 4. An existing conditions capacity and level of service analysis shall be computed for the roadway network. The performance indicators (i.e. delay and queue length) shall be included in this section.
- C. Site Traffic Forecast. Anticipated peak hour and daily traffic generated by the development on roadways within the study area shall be quantified. This should include a discussion on the distribution of site generated traffic as it relates to the existing street system. All traffic impact assessments should include traffic generated by other developments within the study area that have received state/local approval in part or in whole. For design speeds greater than 30M.P.H., the Planning Board may impose stricter restrictions based upon Mass Highway Design Manual.
- D. Future Conditions
 - 1) Future conditions capacity analysis (i.e. V/C, LOS, delay, queue) shall be computed for no-build and build, with and without mitigation measures. Future conditions should consider background traffic growth on an annual average basis;
 - 2) Signal Warrant Analysis shall be performed, if applicable;
 - 3) A review of the impact of entrances relative to AASHTO standards for subdivision roadways on the adjacent roadways shall be included (including sight lines for entering and merging traffic at street intersections).
- E. Mitigative Measures. Description of proposed mitigation measures for any potential adverse impacts identified in the traffic impact assessment.
- F. Narrative Discussion. Narrative discussion for the following shall be provided:
 1. Travel safety characteristics or any streets substantially impacted by allowing the “build” alternative, considering such things as sight distance limitations, width limitations, horizontal or vertical alignment deficiencies and surface conditions.

2. Streetside safety of any streets substantially impacted, considering such things as the amount and type of development along such streets, presence of sidewalks, vehicle speeds and any outstanding limitations in sight distance and road configuration.
 3. Impact on pedestrian safety and convenience.
 4. Noise impacts on residential premises.
- G. Procedure. Applicants for projects to which this policy is applicable are encouraged to contact the Town Engineer early in project design regarding the scoping of any traffic studies, including consideration of the study area boundary and the type of mitigations, if any, which are likely to prove appropriate. Impact studies should be submitted at the time of application for subdivision plan approval to allow review prior to the public hearing or meeting at which the proposal will be presented.
5. Review by Board of Health as to Suitability of the Land.

At the time of filing of the definitive plan, the Board shall transfer to the Board of Health two (2) contact prints of the definitive plan, dark line on white background. The Board of Health shall within forty-five (45) days after filing of the plan report to the Board in writing, approval or disapproval of said plan, it shall make specific findings as to which, if any, of the lots shown on such plan cannot be used for building sites without injury to the public health, and include such specific findings and the reasons therefor in such report, and where possible, shall make recommendations for the adjustment thereof. Every lot (so located that it cannot be served by a connection to the municipal sewer system) shall be provided with a septic tank and drain field satisfactory to the Board of Health.

6. Approval under Massachusetts General Law, Chapter 131, Section 40 (The Wetlands Protection Act)

Any person submitting a subdivision for approval by the Board, said subdivision to be built within 100 feet of any of the resource areas listed under said M.G.L. Chapter 131 s. 40, shall file for a permit with the Shrewsbury Conservation Commission to perform such work under the Wetlands Protection Act. This permit must be obtained before any development work commences.

7. Public Hearing

- a. Before approval, modification and approval, or disapproval of the definitive plan is given, a public hearing shall be held by the Board. The Planning Board shall prepare the notice with sufficient identification and shall notify the applicant regarding the time and place for the public hearing. It is the applicant's responsibility and expense to ensure that the notice is advertised in a newspaper of general circulation in the Town once in each of two (2) successive weeks, the first publication being not less than fourteen (14) days before the day of such hearing. A copy of the advertisement shall be mailed to the Planning Board as proof of notification. It is the applicant's responsibility to obtain and certify from the Assessors Office a certified list of names of all abutters within three hundred (300) feet of the subdivision as they appear on the most recent tax list and proof that the applicant has properly notified all abutters by certified mailing at least fourteen days prior to the public hearing.

- b. **Waivers.** The Planning Board may, where such action is in the public interest and not inconsistent with the intent and purpose of the subdivision control law, waive strict compliance with its rules and regulations. Requests for waivers from Planning Board regulations shall be submitted with the definitive plan and either stated on the plan or contained in a separate instrument attached thereto and referred to on said plan. All such requests for waivers shall be heard at the public hearing on the definitive plan. For each waiver requested, the applicant shall provide the following data for application review: the reason the waiver is requested, alternatives to granting the waiver, impact of waiver denial on the project, and the reasons the applicant believes the waiver to be in the public interest and is not inconsistent with the intent and purpose of the subdivision control law.

8. Performance Guarantee

Before endorsement of its approval of a definitive plan of a subdivision by the Board, the subdivider shall agree to complete the required improvements specified in Section V for any lots in a subdivision, such construction and installation to be secured by one, or in part by one and in part by the other, of the following methods which may from time to time be varied by the applicant:

- a. **Approval with Bonds or Surety**

The applicant shall either file a performance bond with approved surety or a deposit of money or negotiable securities in an amount determined by the Board to be sufficient to cover the cost of all or any part of the improvements specified in Section V not covered by a covenant under b. hereof. Such bond or security, if filed or deposited, shall be approved as to form and manner of execution by the Planning Board and shall be contingent on the completion of such improvements within one (1) year of the date of the bond, unless the time is extended by a vote of the Board.

- b. **Approval with Covenant**

The applicant shall file a covenant, executed and duly recorded by the owner of record, running with the land, whereby such ways and services as specified in Section V shall be provided to serve any lot before such lot may be built upon or conveyed other than by mortgage deed; provided, that a mortgagee who acquired title to the mortgaged premises by foreclosure or otherwise and any succeeding owner of such premises or part thereof may sell any such lot, subject to that portion of the covenant which provides that no lot shall be built upon until such ways and services have been provided to serve and services have been provided to serve such lot; and provided, further, that nothing herein shall be deemed to prohibit a conveyance by a single deed, subject to such covenant, of either the entire parcel of land shown on the subdivision plan or of all lots not previously released by the Board. A deed of any part of the subdivision in violation hereof shall be voidable by the grantee prior to the release of the covenant but not later than three (3) years from the date of such deed.

Any covenant given under the preceding paragraph and any condition required by the Health Board or officer shall be either inscribed on the plan or contained in a separate document, referred to on the plan.

9. Reduction of Bond or Surety

The penal sum of any such bond, or the amount of any deposit held under clause a. above, may, from time to time, be reduced by the Board, and the obligations of the parties thereto released by said Board in whole or in part for work completed and accepted by the Board.

10. Release from Performance Guarantee

Upon the completion of the improvements required under Section V, security for the performance of which was given by bond, deposit or covenant, or upon the performance of any covenant with respect to any lot, the applicant, shall send by registered mail to the Town Clerk and the Board a written statement that the said construction or installation in connection with which such bond, deposit or covenant has been given has been completed in accordance with the requirements contained under Section V, such statement to contain the address of the applicant. If the Board determines that said requirements have been completed, it shall release the interest of the town in such bond and return the bond or the deposit to the person who furnished the same, or release the covenant by appropriate instrument, duly acknowledged, which may be recorded. If the Board determines that said construction or installation has not been completed, it shall specify in a notice sent by registered mail to the applicant and to the Town Clerk the details wherein said construction and installation fails to comply with its rules and upon failure so to do within forty-five (45) days after the receipt by said clerk of said statement all obligations under the bond shall cease and terminate by operation of law, any deposit shall be returned and any such covenant shall become void. In the event that said forty-five (45) day period expires without such specification, or without the release and return of the bond or return of the deposit or release of the covenant as aforesaid, the said clerk shall issue a certificate to such effect, duly acknowledged, which may be recorded.

11. Release of Lots if Lender Guarantees Construction

Following the recording of a first mortgage covering the premises shown on the plan or a portion thereof given as security for advances to be made to the applicant by the lender, the Board may, at its option, release lots from the operation of the covenant given pursuant to clause b. above, without receipt of a bond or deposit money upon delivery to the Board of an agreement with the Board, which agreement shall be executed by the applicant and the lender and shall provide for the retention by the lender of sufficient funds otherwise due the applicant to secure the construction of ways and the installation of municipal services specified in Section V. Said agreement shall also provide for a schedule of disbursements which may be made to the applicant upon completion of various stages of the work, and shall further provide that in the event the work is not completed within the time set forth by the applicant, any funds remaining undisbursed shall be available for completion.

12. Failure of Performance

Any such bond may be endorsed and any such deposit may be applied by the Board for the benefit of the Town, as provided in Section 81 Y of the General Laws upon failure of the performance for which any such bond or deposit was given to the extent of the reasonable cost to the Town of completing such construction and installation.

13. Certificate of Approval

The action of the Board in respect to such plan shall be by vote, copies of which shall be certified and filed with the Town Clerk and sent by delivery or registered mail to the applicant. If the Board modifies or disapproves such plan, it shall state in its vote the reasons for its action. Approval, if granted, shall be endorsed on original drawing of the definitive plan by the signatures of a majority of the Board (or by the signature of the person officially authorized by the Board,) but not until the statutory twenty (20) day appeal period has elapsed following the filing of the certificate of the action of the Board with the Town Clerk, and said Clerk has notified the Board that no appeal has been filed. After the definitive plan has been approved and endorsed, the applicant shall furnish the Board with seven (7) prints thereof.

Approval of the definitive plan does not constitute the laying out or acceptance by the Town of streets within a subdivision.

14. Rescission

Failure of the developer to record the definitive plan within a six-month period of its endorsement or to comply with the construction schedule of the performance agreement shall constitute sufficient reason for the Planning Board to consider rescission of such approval, in accordance with the requirements of M.G.L.A. C. 41§ 81-W.

SECTION IV

DESIGN STANDARDS

A. Streets

1. Location and Alignment

- a. All streets in the subdivision shall be designed so that, in the opinion of the Board, they will provide safe vehicular travel. Due consideration shall also be given by the subdivider to the attractiveness of the street layout in order to obtain the maximum livability and amenity of the subdivision.
- b. The proposed streets shall conform, so far as practicable, to the Master or Study Plan as adopted in whole or in part by the Board.
- c. Provision satisfactory to the Board shall be made for the proper projection of streets, or for access to adjoining property which is not yet subdivided.
- d. Reserve strips prohibiting access to streets or adjoining property shall not be permitted, except where in the opinion of the Board, such strips shall be in the public interest.
- e. Street intersections with centerline offsets of less than 250 feet shall be prohibited.
- f. The minimum centerline radii of curved streets shall be 200 feet. Greater radii may be required for major streets.
- g. Streets shall be laid out so as to intersect as nearly as possible at right angles. No street shall intersect any other street at less than 60 degrees.
- h. Property lines at street intersections shall be rounded or cut back to provide for a curb radius of not less than thirty (30) feet. and be constructed of vertical granite curbing the entire length of the curve.
- i. Street patterns derived solely for the purpose of providing maximum lot development will be cause for disapproval.
- j. Cuts or fills in excess of eight (8) feet or roadway locations resulting in lots being more than eight (8) feet above or below the grade of the roadway shall be substantiated by the submission of cross sections showing the proposed grading within 200 feet of the roadway on both sides at intervals to be determined by the Board.
- k. Roadway cross sections shall be in accordance with the Typical Roadway Section in Appendix B.
- l. Roads shall be related appropriately to the topography. Minor roads shall be curved wherever possible to avoid conformity of lot appearance. All streets shall be arranged so as to obtain as many building sites as possible at, or above, the grade of the street. Grades of streets shall conform as closely as possible to the original topography. A combination of steep grades and curves shall be avoided.

2. Width

The minimum width of street right of ways shall be fifty (50) feet. Greater width may be required by the Board when deemed necessary for major and secondary streets. The minimum width of pavement in all proposed streets shall be thirty (30) feet.

3. Grade

- a. Grades of streets shall be not less than 0.75%. Grades shall not be more than 6.0% for major streets not more than 8% for minor and secondary streets.
- b. All street intersections shall have a grade of not more than 2% for a minimum distance of fifty (50) feet measured from the gutter line.
- c. Vertical curves shall be installed wherever the change in grade exceeds two (2) percent. All vertical curves shall be designed to accommodate a minimum stopping sight distance of 200 feet. At a design speed of 30 MPH. All calculations shall be based on the formulas listed in the Highway Design Manual produced by the Commonwealth of Massachusetts, Department of Public Works.

4. Dead-End Streets

- a. Dead-end streets shall not be longer than 600 feet unless, in the opinion of the Board, a greater length is necessitated by topography or other local conditions.
- b. Dead-end streets shall be provided at the closed end with a turnaround having an outside roadway diameter of at least 100 feet, and a property line diameter of at least 120 feet.
- c. Consideration will be given to other forms of turnaround.

B. Sidewalks

Sidewalks and wheelchair access ramps shall be designed to meet the standards of the Architectural Access Board as amended from time to time.

C. Easements

1. Easements for utilities across lots or centered on rear or side lot lines shall be provided where necessary and shall be at least twenty-five (25) feet wide.
2. Where a subdivision is traversed by a water course, drainage way, channel or stream, the Board may require that there be provided a storm water easement or drainage right of way of adequate width to provide access for construction, maintenance or other necessary purposes.
3. An easement shall be provided for Shrewsbury Electric Light Plant and Community Cablevision in all street rights of way and within a ten (10) foot strip running along both sides of the proposed right(s) of way. See "Typical Conduit and Easement" detail in the Appendix." (adopted 4/2/87)

D. Open Spaces

Before approval of a plan, the Board may also, in proper cases, require the plan to show a park or parks suitably located for playground or recreation purposes or for providing light and air. The park or parks shall not be unreasonable in area in relation to the land being subdivided and to the prospective uses of such land. The Board may by appropriate endorsement on the plan require that no building be erected upon such park or parks without its approval for a period of three (3) years. The total amount of park area shall be approximately 8% of the gross area of the subdivision.

E. Protection of Natural Features

Due regard shall be shown for all natural features, such as large trees, water courses, scenic points, historic spots, and similar community assets which, if preserved, will add attractiveness and value to the subdivision.

F. Lot Sizes

Proposed lots shall be in conformance with the Town's Zoning Bylaw for the zoning districts in which the subdivision is located.

G. Utilities - General

All utilities shall be placed underground at the time of initial construction.

H. Storm Drainage Systems

The drainage system shall be in accordance with DEP Stormwater Management Guidelines and The Town of Shrewsbury's NPDES Phase II General Permit as amended from time to time.

Storm drainage systems shall be designed on the basis of a storm occurring once in 25 years, and the resulting runoff shall be calculated by the Rational Formula ($Q = Aci$) or SCS Method." Values of "c" less than 0.30 are not to be used in the computations.

All existing waterways, whether they are permanent or intermittent, shall be accommodated using appropriately sized culverts. Culverts conducting waterways underneath roadways shall be extended beyond the right-of-way line to a point of at least twenty (20) feet beyond the rear range line of the proposed dwellings and shall terminate with concrete headwalls or flared end of an approved design to provide a maximum ground slope of 1 on 3. All open water ways shall have side slopes not exceeding 1 on 3.

Vane or cascading type grates shall be installed on all catch basins on roads with a grade of 5% or greater.

The peak rate of flow of runoff from the site after development shall not exceed the peak rate of flow of runoff from the site prior to development during 10, 25 and 100 year return frequency storm events. Calculations shall be submitted to confirm this. These calculations shall be based

on the methods contained in SCS Technical Release 55 or in Technical Release 20, as appropriate.

All detention basins shall be excavated an additional one (1) foot below the design elevation until all roads contributing drainage have at least a base coat of asphalt, berms and the drainage structure are functioning.

All detention basins shall be surrounded with a minimum of a ten (10) foot wide graveled level area suitable for maintenance vehicles with adequate access from the proposed roadway.

Storm drains, culverts, ditches and related installations, including catch basins, drop inlet manholes and gutters shall be installed as needed, in the opinion of the Board to provide adequate disposal of surface and subsurface water, including control of erosion, and flooding, from or in the subdivision and adjacent land.

Drainage area plans showing pre-development, post-development and street drainage areas, times of concentration and topography shall be submitted with the drainage study.

I. Sanitary Sewers

All sewers shall be designed in accordance with “TR-16: Guides for the Design of Wastewater Treatment Works” and DEP regulations as amended from time to time.

Whenever the existing sanitary sewers are within 2,000 feet of a proposed subdivision, the developer shall make all necessary arrangements and shall construct the connecting sewer. Before connecting to any Town sewer, the developer must enter into an agreement with the Board of Sewer Commissioners for this right.

When the Town's sanitary sewer system is not available to the proposed subdivision, the developer may be required to install a sanitary sewer system and connect it to a temporary sewage treatment facility to be located on a lot or lots, depending upon the size of the development. This system must be approved by the local Board of Health and the Massachusetts Department of Public Health.

J. Water Distribution System

Water mains shall be AWWA C-900 PVC pipe at least 6 inches in diameter on dead-end streets not exceeding 600 feet in length and 8 inches or larger for all other streets.

K. Fire Hydrants

Hydrants shall be provided every 500 running feet on one (1) side of each street unless a greater distance is approved. Hydrants shall be located at all high points and low points.

L. Subdivision Standards for the Flood Plains - (Adopted April 3, 1980)

All proposed subdivisions shall be reviewed to determine whether they will be reasonably safe from flooding. If any part of a proposed subdivision is located within the Flood Plains established under the Zoning Bylaw, it shall be reviewed to assure that:

1. The proposal is designed consistent with the need to minimize flood damage.
2. All public utilities and facilities, such as sewer, gas, electrical and water systems shall be located and constructed to minimize or eliminate damage to them from flooding.
3. Adequate drainage systems shall be provided to reduce exposure to flood hazards.
4. Base flood elevation (the level of the 100-year flood) data shall be provided for proposals greater than 50 lots or 5 acres, whichever is the lesser, for that portion within the Flood Plain District.
5. Development is consistent with the provisions of Section VII-l of the Zoning Bylaws.

M. Driveways and Openings

Driveway Openings shall not be placed closer than ten (10) feet from the point of curvature or tangency of an intersecting street. Driveway openings shall not be less than ten (10) feet and no greater than twenty (20) feet in width at the front property line.

Driveway Openings shall have a curb return radius at the roadway of five (5) feet on streets with a fifty (50) foot wide right-of-way and three (3) feet on streets with a forty (40) foot wide right-of-way. Driveway opening curb returns shall not be located within five (5) feet of any proposed and/or existing catch basin. The granite curb inlet shall not be removed.

Driveway grades shall not exceed ten (10) percent between the edge of the right-of-way and the limit of the front yard set back. Each lot shall have only one (1) driveway opening for each length of frontage required by the zoning bylaw.

Three (3) copies of a site plan showing all proposed grades, existing topography and utilities with a benchmark referencing to the Town's vertical datum shall be submitted with the application for each building permit within a subdivision. The site plan shall be reviewed and approved by the Town Engineer prior to the Engineering Department's endorsement on the building permit application. (See Appendix B for a sample drawing). One (1) copy will be issued to the Town's inspector for field verification, one (1) copy will be retained for comparison with the final as-built drawing, and the final copy will be returned to the applicant.

N. Neighborhood Playground

1. Planning. The developer shall collaborate with the Parks and Recreation Department as to nature of the neighborhood facility to be constructed, and shall provide information regarding the characteristics of the prospective site and the anticipated neighborhood demographics.
2. Submittals to Planning Board with a copy to the Parks & Recreation Department:
 - a) Site Layout:
 - Relationship of site to houses and traffic
 - Identification and placement of equipment and other components
 - Grades - existing and proposed
 - Planting and/or clearing

- Drainage
- Fencing
- Parking/vehicle access
- Utilities

b) Detail:

- Curbs, berms, borders and edging
- Fencing and guardrail
- Play equipment/apparatus
 - Make and model
 - Manufacturer's statement of testing and compliance
- Park equipment and site amenities (i.e. benches, tables, etc.)
 - Make and model
- Playing court layouts and striping (basketball, tennis, etc.)

O. Phasing Schedule

1. Phasing Schedule

- a. Purpose. In order to provide for the orderly construction, proper supervision and timely inspection of ways, utilities and drainage in the subdivision and in order to ensure compliance with these Rules and Regulations each plan for definitive subdivision approval shall contain a Phasing Schedule.
- b. Contents of Phasing Schedule. A Phasing Schedule shall include a schedule for construction of ways, utilities, drainage, grading and construction of dwellings and such other matters as the Planning Board shall reasonably request. All Phasing Schedule plans shall be submitted at a scale of one (1) inch equals one hundred (100) feet or with an appropriate scale to show the entire subdivision on one sheet. The Phasing Schedule shall indicate the length of roads and lots to be constructed during each phase of the subdivision.
- c. Approval of Phasing Schedule. Except where the Planning Board shall expressly find that such action is in the public interest and not inconsistent with the subdivision control law, the Planning Board shall not approve a Phasing Schedule which provides for:
 1. Grading or disturbance of both lots and roadways of more than 12 acres of each in any twelve (12) month period.
 2. Construction of more than 2,000 linear feet of roadway in any twelve (12) month period.
 3. Construction of more than twenty-five (25) dwelling units in any twelve (12) month period.

The foregoing to the contrary notwithstanding, the Planning Board shall not require any Phasing Schedule to exceed eight (8) years.

d. Application of Phasing Schedule to Multiple Subdivision Plans

1. The Planning Board may, in its discretion, refuse to approve a Phasing Schedule or Phasing Schedules for any definitive plan or plans submitted to avoid or frustrate the purpose and intent of this provision.

2. The Planning Board may in its discretion require a single Phasing Schedule for the subdivision of land: 1) held as a single parcel or in common ownership as of the date of the adoption of this provision, or; b) within three years prior to the submission of such plan.
- e. Procedures for Phasing Schedules
1. In order to facilitate review, the developer may submit a written proposed phasing schedule to the Planning Board as part of any application for preliminary or definitive subdivision approval.
 2. The Planning Board shall approve a phasing schedule that is consistent with the provisions of this Section IV (N).
 3. Approved phasing schedules for the type of development described in Section IV(N)(1)(e) (I) shall be incorporated, where appropriate, as part of the decision filed with the Town Clerk, whether inscribed on the plan and/or filed as a separate attached document.

SECTION V

REQUIRED IMPROVEMENTS AND CONSTRUCTION PROCEDURES
FOR AN APPROVED SUBDIVISION

A. Line and Grade Control

1. All survey work shall be done under the direction of a registered professional engineer or land surveyor.
2. Before any roadway excavations are started, the roadway right- of-way shall be witnessed at fifty (50) foot intervals on both sides, and the proposed finished grades shall be marked thereon. Before any lots are built upon, the corners of the lots shall be witnessed. The aforementioned witness stakes shall be preserved throughout all the construction procedures.
3. All proposed underground utility work shall be controlled with respect to line and grade by offset stakes, batter boards, laser instruments, etc., as approved by the Town Engineer.
4. All easements shall be witnessed before any lot on which they are located is built upon.
5. Monument locations shall be staked and witnessed by at least four (4) reference points.

B. Street and Roadway

1. The entire area of each street or way shall be cleared of all stumps, brush, roots, boulders, like materials and trees not intended for preservation. Tree limbs, logs, brush and stumps shall be either chipped or removed from the site. None of the aforementioned shall be buried onsite. All loam and other yielding material shall be removed from the roadway area of each street or way and replaced with suitable material.
2. The plane of the bottom of the excavation and the top of the fill when completed shall be known as the subgrade. Before gravel is spread, the subgrade shall be shaped to a true surface, conforming to the proposed cross section of the street and rolled by a self-propelled roller weighing not less than twelve (12) tons. No gravel shall be placed on the finished subgrade until approval is given by the Town Engineer.
3. All roadways shall be brought to a finished top of gravel grade as shown on the profiles of the definitive plan with a minimum of eighteen (18) inches of gravel spread and rolled in layers not exceeding eight (8) inches in depth. Any stone with a dimension greater than six (6) inches shall be removed before it is rolled. Rolling shall be done with a self- propelled roller weighing not less than twelve (12) tons. Gravel shall consist of hard, durable stone and course sand, practically free from loam and clay and uniformly graded.
4. No bituminous concrete shall be applied until the Town Engineer inspects and approves the finished gravel base.

5. A four (4) inch compacted thickness of Class I bituminous concrete pavement, Type I-1, shall be placed on all roadways in conformance with the Massachusetts Department of Public Works Standard Specifications for Highways, Bridges and Waterways. two and one half (2 - 1/2) inches of course mix (binder) bituminous concrete shall be laid, then upon which shall be laid a one and one half (1 - 1/2) inch course of fine mix (top) bituminous concrete.
6. Granite curbing, type VB, shall be installed on both sides of the roadway in conformance with Massachusetts Department of Public Works Standard Specifications for Highways and Bridges.

Granite curbing shall be installed prior to release of any lots for house construction. Construction berm approved by the Town Engineer may be installed as a temporary alternative to granite curbing. Any curbing or construction berm damaged during construction shall be immediately replaced.

7. Certifications as to conformance with the specified materials shall be furnished the Town Engineer prior to placement of any pavement and upon completion of the work as to the quantity placed. Unless otherwise specified, all materials and workmanship shall conform to the requirements of the Standard Specifications for Highways, Bridges and Waterways by the Department of Public Works of the Commonwealth of Massachusetts.
8. The bituminous concrete binder course, curbing and sidewalk base shall be placed about the entire frontage of each lot before any dwelling located thereon is occupied. The developer shall be responsible for the maintenance of the base pavement and curbing until the top surface has been placed and the surety covering same released by the Planning Board. The Town will not plow snow in any subdivision street which does not conform to the foregoing requirements.

The bituminous concrete binder course shall have been in place at least through one winter before installation of the top course. (Adopted April 8, 1977)

C. Sidewalks

The subgrade for five (5) foot wide sidewalks shall be compacted, shaped and rolled. A foundation of not less than six (6) inches of gravel conforming to the requirements for roadway base shall be placed on the subgrade and rolled to a grade two and one half (2 - 1/2) inches below finish top of walk. The gravel foundation shall be increased to twelve (12) inches at driveways. Two compacted layers of top and bottom bituminous concrete shall be placed and thoroughly rolled on the graded gravel foundation. The bottom (binder) course of sidewalk pavement shall be one and one half (1 - 1/2) inches thick and the top (finish) course shall be one (1) inch thick. All rolling shall be done with a self-propelled roller weighing not less than three (3) tons.

D. Grass Plots

A six (6) foot wide grass plot shall be constructed between the front edge of curbing and front edge of sidewalk. Loam topsoil shall be placed to a depth of four (4) inches after rolling with a hand roller weighing not less than one hundred (100) pounds per foot of width. The source of

loam shall be inspected and approved by the Town Engineer before placing. It shall have a normal amount of organic matter and be reasonably free from roots, hard dirt, heavy or stiff clay, stones larger than one (1) inch, lumps, coarse and noxious weeds, stick brush or other litter. Ground limestone, where necessary, shall be spread and thoroughly incorporated into the loam. Fertilizer shall be spread at the rate of two-tenths (0.2) of a pound per square yard and thoroughly incorporated into the loam. Seed conforming to the following proportions:

Red Fescue or Chewing's Fescue 60%
 Red Top 20%
 Kentucky Blue 20%

shall be spread at the rate of three and six tenths (3.6) pounds to each one hundred (100) square yards. After raking a fine layer of loam over seed, the area shall be rolled with a hand roller weighing not less than one hundred (100) pounds per foot of width.

E. Monuments

Granite monuments shall be installed at all street intersections, at all points of change in direction or curvature of streets, and at other points where, in the opinion of the Board, permanent monuments are necessary. No permanent monument shall be installed until all construction which would destroy or disturb the monuments is completed. The bounds shall be set at the depth and position as directed, and they shall not project above the ground more than two (2) inches. Bounds to be located in lawns, sidewalks, or drives may be set with the top of bound flush with the finished surface. Material for backfilling shall consist of suitable excavated material or borrow carefully placed about the bound and thoroughly tamped.

Granite monuments shall be four (4) feet long with the top surface and top twelve (12) inches on the four sides pointed. Top twelve (12) inches shall be six (6) inches square with a one-half (1/2) inch diameter hole one (1) inch deep in the center of the top surface. The Town Engineer shall approve setting procedures before any bounds are set, and all excavations shall be made using hand tools, or approved auger-type excavators. When the bound points fall on ledge, the use of a wrought iron rod may be directed by the Engineer, in which case a one and one-half (1-1/2) inch hole shall be drilled to a depth of eight (8) inches and a one (1) inch wrought iron rod shall be driven and wedged in the hole and then securely grouted.

Reinforced concrete bounds of the same dimensions as for granite bounds shall be installed at angle points on all easements and open space parcels.

F. Street Signs

Street signs of the same design and quality as presently being installed by the Shrewsbury Highway Department shall be installed at each street intersection prior to the occupation of any dwelling. The location of street signs shall be subject to the approval of the Highway Department.

G. Trees

Trees shall be installed at an average spacing of 100 feet on both sides of the proposed roadways. Trees provided shall be a wide variety of species with not more than twenty (20) percent of any one species planted within a subdivision. The Town of Shrewsbury Tree Warden shall approve

the species of tree. Norway Maples shall not be allowed. Trees shall be approximately two and one half (2 - 1/2) inch caliper, ten (10) to twelve (12) feet tall with good straight stems. These trees shall be planted either in the four and one-half (4-1/2) foot grass plots or behind the sidewalks, no further than ten (10) feet. All locations shall be subject to the approval of the Town Engineer.

The planting cavity shall be of sufficient depth and width to accommodate the root system without cramping. A minimum of one (1) foot of loam and sufficient fertilizer shall be placed at each planting, and a minimum of three (3) foot circle, two (2) inches deep of woodchip mulch shall surround each tree at the surface. The trees shall be well watered when planted.

Each tree shall be supported with a 2" x 2" x 8' wooden stake and shall be fastened at the top with a loop of rubber or suitable fabric hosing.

All trees shall be subject to a one (1) year guarantee.

H. Utilities

1. Sanitary Sewers

All sewers shall be constructed in accordance with "TR-16: Guides for the Design of Wastewater Treatment Works" and DEP regulations as amended from time to time.

There shall be no construction on any portion of a subdivision until a sewer extension permit is obtained from the Department of Environmental Protection.

Collector sewers shall be SDR 35 PVC pipe of a class specified by the Town Engineer; at least eight (8) inches in diameter laid to a minimum slope of one-half (1/2) foot per 100 feet and shall be deep enough to drain basement fixtures and prevent freezing. Precast concrete manholes shall be constructed at the ends of each line, and at all changes in grade, size and alignment. They shall not exceed a spacing of 300 feet, and shall be in accordance with the typical details for same in the appendix.

Line and grade shall be controlled by the use of laser instruments. All sewer pipe and manholes shall be tested according to the current municipal standards for the construction and testing of sewer. The developer shall be responsible for furnishing all necessary materials, equipment and labor to conduct the tests which must be witnessed by the Engineering Department.

House services shall be at least six (6) inches in diameter, laid at a minimum pitch of one-quarter (1/4) inch per foot. All sewers, including house services, shall be laid in an envelope of three quarter (3/4) inch washed gravel. Deflections in line or grade in excess of one-half (1/2) inch will be cause for rejection.

2. Storm Drains

All drain pipe shall be reinforced concrete conforming to A.S.T.M. Designation C76, Class III pipe, or such higher class as may be required by depth of trench, and shall be at least

twelve (12) inches in diameter, and shall be laid to a slope which will maintain a velocity of three (3) feet per second when flowing full using $N = .015$.

Manholes shall be constructed at the end of each line, catch basin connections, at changes in grade, size and alignment, and shall not exceed a spacing of 300 feet.

Catch basins with three (3) foot sumps shall be built at all low points and on continuous upward grades at a spacing not to exceed 300 feet from the low point or preceding catch basins. Drains shall be laid with open bottom joints in a three- quarter (3/4) inch washed gravel cradle.

Provisions shall be made to collect and remove silt from the drainage system during the construction period.

3. Water

Water mains shall be laid to provide a minimum cover of five (5) feet from the finished grade, and shall not be deeper than eight (8) feet. All piping shall be AWWA C900 PVC pipe designed for a internal working pressure of at least 150 psi. Fittings shall be cement lined and designed for the same internal working pressure. All fittings and hydrants shall have properly designed concrete thrust blocks installed behind them.

Gate valves shall be installed on each outlet of all tees and crosses; every 1,000 feet of main; on hydrant branches; and at dead ends.

Hydrants shall be located every 500 feet, and shall have a one (1) inch washed stone drainage sump one-half (1/2) cubic yard in volume at its base.

Gate valves, road boxes and hydrants shall be equal in quality to those presently being purchased by the Town's Water Department.

Upon completion of the water main construction and prior to putting into service, a pressure and leakage test will be made. Any defects found shall be corrected immediately. Once a successful test has been run, the lines shall be chlorinated before they are put into service. The developer shall be responsible for providing all necessary equipment and labor to conduct the tests and chlorination which must be witnessed by the Engineering Department.

Every dwelling lot within an approved subdivision shall contain a deed restriction, which states that automatic lawn sprinkler systems shall only be installed if a private irrigation well is provided. Connecting automatic lawn irrigation systems to the public water supply system shall also be prohibited in the deed restriction.

4. Electric, Community Cablevision, and Telephone Wiring and Street Lighting

All electric, community cablevision, telephone and other utility wires shall be placed underground in all subdivisions in strict conformity with the requirements of the particular utility company for such installations. Electric and community cablevision wiring and appurtenances as well as street lighting shall be provided in all subdivisions in accordance

with the requirements of the Shrewsbury Electric Light Plant. Utility easements will be required as per Section IV B. paragraph 3. (Adopted 4/2/87)

5. Gas Transmission

If gas is to be installed in the work, then the Commonwealth Gas Company must obtain a location in the right-of-way from the Town Engineer.

6. General

All utility services to each lot must be installed before the gravel base course is constructed.

All utility trenches shall be compacted by hydraulic jetting prior to placement of bituminous concrete binder.

All utility layouts shall be shown either on the definitive plan or copies of the definitive plan and are subject to the approval of the Board.

No backfilling or covering of any pipe shall be permitted until approved by the Town Engineer. Selected materials shall be tamped under and around pipes in six (6) inch layers to a point twelve (12) inches above the top of the pipe. See Standard Details in Appendix B.

The developer shall be responsible for the repair to any of his work for a period of one (1) year following original approval of same.

All utility castings shall be set flush with base pavement and be adjusted to finish grade prior to placing the top course of pavement.

I. Clean-Up During Construction

The work sites shall be kept reasonably clear of debris at all times. Prior to the occupation of any house, the roadway base pavement, berms and sidewalk base shall have been installed, extending to and fronting the lot on which said house is located. During additional house construction, existing paved surfaces shall be kept clear of dirt, and dust nuisances shall be kept abated. All drainage ditches, pipes and structures shall be kept clear of debris and open for control of storm water.

Upon completion of the subdivision, the developer shall remove all temporary structures, rubbish and surplus materials from the area.

All pavements shall be swept clean and catch basin sumps shall have all accumulated debris removed therefrom.

J. Record Drawings and Acceptance Plans

Upon completion of the roadways, the developer shall have the original plans and profiles, which were approved by the Board, corrected and certified by his engineer to show the actual as-built locations and grades of all utilities and roadway profiles and any changes authorized by the Board or the Town Engineer. These plans shall be drawn with India ink on mylar. This plan will be known as the record drawing. Ties to all gate valves, tees, service connection shut offs, sewer

Y's, house locations, sill elevations, type, size and location of all utilities etc., shall be superimposed thereon.

Record drawings, acceptance plans, and legal descriptions shall be in accordance with the Engineering Department's "Specifications for As-Built Record Plans, Street Acceptance Plans and Engineering Descriptions" as amended from time to time.

In addition to the record drawings, an acceptance plan shall be prepared and certified by a registered land surveyor. This plan shall be drawn with India ink on mylar, showing the street widths, distances, bearings and complete curve data for all street lines and easements. All stone bounds set during the construction and any existing prior thereto shall be shown.

A blank space four (4) inches by eight (8) inches shall be provided on the lower right-hand corner of the plan for a title block to be filled in by the Town Engineer. The surveyor shall place a certification on the plan stating that the street or streets or portions thereof shown have been laid out and the monuments have been set as shown. The plan shall be signed by the surveyor and his stamp shall be affixed thereto.

The record drawing, acceptance plan and the engineering description shall be submitted on individual sheets for each street in the subdivision and be accompanied by an electronic copy of each suitable to the Engineering Department no later than the 15th of January of the year in which the developer requests the Annual Town Meeting to make the streets public.

K. Maintenance of Roadways

The developer shall be responsible for maintaining in good repair all roads in a subdivision for a period of two (2) years following their completion, or until they are accepted by the Town Meeting, whichever time is shorter. This maintenance shall include sweeping, cleaning of catch basins, repair of any settlements or cracking and adjustment of castings within the pavement.

L. Industrial Subdivisions

Industrial subdivisions shall conform to all requirements applicable to residential subdivisions except as follows:

1. Sidewalks will be required on both sides of all streets.
2. Pavement thickness shall be three (3) inches and shall be placed in two (2) courses. The bottom course shall be two (2) inches thick and the top one (1) inch. The top course shall not be placed until all utility connections have been made to each lot.
3. Pavement width shall be thirty-six (36) feet between berms.
4. Berm radii at street intersections shall be fifty (50) feet minimum.
5. Roadway grades shall not exceed six (6) percent.
6. Looping streets and second exits should be provided to avoid cul-de-sac type turnarounds.

7. Travel lanes shall be marked in accordance with the latest Manual on Uniform Traffic Control Devices, Commonwealth of Massachusetts, Department of Public Works.

M. Protection of Overhead and Underground Electrical Power Transmission Facilities
(Adopted January 6, 1977)

1. No construction equipment shall be operated within 25 feet horizontally of any tower or support nor within 15 feet vertically of the transmission wires.
2. Access shall be maintained at all times to the towers or structures. To this end, no earth shall be disturbed within 25 feet of any such structure and no slope shall commence therein. No slope shall be steeper than 1 on 2.5.
3. Excavations about or near buried transmission facilities are prohibited until such time as their owner gives written permission to do so.
4. Construction equipment shall not be stored under overhead or over buried facilities.

N. Parkland Playground Equipment

The design and installation of all park and playground equipment shall be approved by the Parks and Recreation Department.

All parks and playground equipment shall comply with the current editions of :

1. U.S. Consumer Product Safety Commission #325 "Handbook for Public Playground Safety",
2. ASTM F1487 "Standard Consumer Safety Performance Specification for Playground Equipment for Public Use",
3. ASTM F1292 "Specifications for Impact Attenuation of Surface Systems Under and Around Playground Equipment",
4. Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities.

O. Wood Guard Rail

Wood guard rails shall be of CCA pressure-treated pine with 4" by 10" rail and 6" x 8" post. Posts shall be 6', with 4' in the ground. Rails shall be fastened with two 1/2" x 10" galvanized bolts per post with washer and nut and shall be set on the 6" post face with top edges 2" below post tops. Rail shall be installed in a continuous run, with posts placed at maximum intervals of 8' on center. Rail shall have a 1" chamfer on each front-facing edge (top and bottom). All posts shall be vertically true and parallel and of uniform above-grade height, and shall be placed prior to rail attachment to assure proper horizontal leveling of the rails. Wood guard rail may be used for the neighborhood playground and parking areas only. Wood guard rails may not be used within roadway right of ways.

P. Loaming and Seeding of Playfields

1. Loam
 - a. Material shall consist of natural loam topsoil, free from subsoil. Loam shall be of uniform quality free from hard clods, stiff clay, hardpan, sods, partially disintegrated

stone, lime, cement, ashes, slag, concrete, tar residues, tarred paper, boards, chips, sticks or any other undesirable material.

- b. Loam shall contain between 5.5 and 7.5 percent organic matter. The acidity range shall be pH 5.0 to pH 7.0 inclusive, adjusted for plants which require low soil pH. The mechanical analysis of the soil shall be as follows:

<u>Passing</u>	<u>Retained On</u>	<u>Percentage</u>
1" screen	-----	100%
1" screen	(gravel)	not more than 3%
¼" screen	sieve(sand)	49%-60%
#100 U.S.S.	(very fine sand,	40%-60%
mesh sieve	silt and clay)	40%-60%

- c. Lime shall be ground limestone containing not less than eighty-five (85%) percent of total carbonated and shall be found to such a fineness that fifty (50%) percent will pass through a one hundred (100) mesh sieve and ninety (90%) percent will pass through a twenty (20) mesh sieve. Coarser material shall be acceptable provided specific rates of application are increased proportionately on the basis of quantities passing the one hundred (100) mesh sieve.
- d. Superphosphate shall contain twenty (20) percent available phosphoric acid.
- e. Commercial fertilizer shall be ten (10) eight (8) six (6) and shall conform to the applicable state fertilizer laws. It shall be uniform in composition, dry and free flowing.

2. Seed

Seed shall be composed of the following varieties which shall be mixed in the proportions and shall test to minimum percentages and germination specified. Seed mixture shall contain no bent grass.

<u>Lawn Seed</u>		<u>Proportion</u>	
<u>Scientific Name</u>	<u>Common Name</u>	<u>By Weight</u>	<u>%G</u>
Festuca rubra	Chewings Fescue	35%	85
Poa Pratensis merion	Merion Bluegrass	20%	85
Lilium Perenne Var	Manhattan Per. Rye	15%	90
Festuca ruba pennlawn	Pennlawn Creeping Red Fescue	30%	90

Application rate shall be 5 pounds per 1,000 square feet or 220 pounds per acre. Seed shall be planted between April 1st and May 31st or August 16th and October 15th.

3. Seeding of Lawn and Playfield Areas

- a. All areas not to be developed otherwise shall be seeded.
- b. Preparation of Subgrade. The subsoil shall be graded and uniformly compacted so that it will be a true, smooth slope. Prior to spreading of loam, the subgrade shall be loosened and mixed to a depth of four (4) inches. All stones over two (2) inches in size, all sticks and rubbish shall be removed. No heavy objects except lawn rollers shall be moved over

- the lawn areas after the subgrade soil has been prepared unless the subgrade soil is again graded as specified above, before topsoil is spread.
- c. **Finish Grading.** After the subgrade soil has been prepared, loam shall be spread evenly and lightly compacted. After the loam has been spread, it shall be carefully prepared by scarifying or harrowing and hand raking. All large stiff clods, lumps, brush, roots, stumps, litter, other foreign material and stones over one (1) inch in diameter shall be removed from the loam and disposed of. The areas shall also be free of smaller stones in excessive quantities. The whole surface shall then be rolled with a hand roller weighing not more than one hundred (100) pounds per foot of width. During the rolling, all depressions caused by settlement of rolling shall be filled with additional loam, and the surface shall be regarded and rolled until presenting a smooth and even finish at the required grade, giving a total depth of six (6) inches of compacted loam.
 - d. Superphosphate shall be applied and thoroughly worked into the surface at the rate of forty (40) pounds per one thousand (1,000) square feet.
 - e. Fertilizer shall be applied in two (2) applications. The first application shall be applied within one (1) week before seeding at the rate of thirty-five (35) pounds per one thousand (1,000) square feet and then harrowed into the top two (2) inches of the loam. The second application shall be applied and thoroughly watered in immediately after the first cutting of the grass at the rate of fifteen (15) pounds per one thousand (1,000) square feet.
 - f. Lime shall be spread in areas to be seeded at the rate of one hundred (100) pounds per one per one thousand (1,000) square feet.
 - g. **Moistening the Soil.** During periods of higher than optimal temperature for species being specified and after all unevenness in the soil surface has been corrected, the soil shall be lightly moistened immediately prior to seeding.
 - h. **Sowing of Seed.** Immediately before any seed is to be sown, the topsoil shall be scarified as necessary and shall be raked until the surface is smooth, friable and of uniformly fine texture. Lawn areas shall be seeded evenly with a mechanical spreader at the rate of five (5) pounds per one thousand (1,000) square feet of area, lightly raked, rolled with a two hundred (200) pound roller and watered with a fine spray. The method of seeding may be varied at the discretion of the Contractor on his responsibility to establish smooth, uniformly grassed lawn areas. Necessary precautions shall be taken to keep the area undisturbed until the grass comes up. Between May 15 and August 15, the Contractor may sow perennial rye grass, ninety-eight (98%) percent purity, ninety (90%) percent germination at the rate of one (1) pound per one thousand (1,000) square feet of area. This shall be a separate sowing executed after the sowing of the regular mixture and before the raking, rolling and watering operations.

SECTION VI

ADMINISTRATION

A. Authority

The Board shall be the administrative agency of these regulations and shall have all the powers assigned them by Section 81A to GG of Chapter 41 of the General Laws.

The Board may assign as their agents appropriate town agencies or officials, and may from time to time hire professional assistance to review plans and inspect improvements at the cost of the subdivider.

The Board on its own motion or on the petition of any interested person shall have the power to modify, amend or rescind its approval of a plan of a subdivision, or to require a change in a plan as a condition of its retaining the status of an approved plan.

B. Variation

1. Waiver of Compliance

Strict compliance with the requirements of these rules and regulations may be waived only when, in the judgment of the Board, such action is in the public interest and not inconsistent with the Subdivision Control Law. In waiving strict compliance, the Board may require such alternative conditions as will serve substantially the same objective as the standards or regulations waived.

2. Cluster or Planned Unit Development

The Board will give consideration to suggestions offered by the subdivider that will tend to provide for the most efficient use of land in harmony with its natural features, particularly those utilizing cluster or planned unit development provisions in the Zoning Bylaw of the Town.

C. Reference

For matters that may arise during subdivision procedures that are not covered by these regulations, the following are accepted as standards in their applicable portions, "Standard Specifications for Highways and Bridges, Massachusetts Department of Public Works" and "Sections 81K to 81GG of Chapter 41 of the General Laws" each as amended or updated from time to time.

D. Inspection and Control

1. At the points hereinafter indicated, the construction of required streets and other improvements shall be inspected:

- a. The installation of underground utilities and services shall be inspected by the Town Engineer or his appointed representative before the backfilling of trenches or other covering of structure.

- b. The roadway shall be inspected by the Town Engineer upon completion of the subgrade, base course, binder and surface course prior to each required construction step.
 - c. The sidewalk shall be inspected by the Town Engineer upon completion of the subgrade base course, finish surface and loam strip prior to each required construction step.
 - d. Following the completion of all the improvements required, the subdivision shall be inspected by the Town Engineer.
2. Unless the approval of the work completed, including approval of materials used to each point, has been given, no further work shall be done until such work is subsequently completed to the satisfaction of the Board.
 3. Inspections shall be requested by the developer, at least twenty-four (24) hours in advance, by notice to the Town Engineer.
 4. When inspection or testing time exceeds five (5) hours in any week, the excess time will be billed the developer based on the employee's actual hourly rate of pay. (Adopted March 5, 1981). Fractions of hours will be considered as a whole hour. Billing will be done monthly by the Town Engineer.
 5. The owner or developer of an approved subdivision shall by certified mail notify the Planning Board and all contiguous property owners seven (7) days prior to commencement of any work therein of his intention to do so. If work is not commenced within 60 days thereof, a new notice shall be sent.

Prior to commencement of said work, the perimeter of the subdivision shall be clearly marked at intervals not exceeding a spacing of 100 feet by wooden stakes. (Adopted October 7, 1976)

6. Construction shall occur no sooner than 7:00 am or later than 7:00 pm on Monday through Saturday. There shall be no work conducted on Sundays or Holidays.

A sign approved by the Town Engineer clearly stating the restrictions on working hours shall be posted at all entrances to subdivisions.

E. Enforcement by Denial of Building Permits

No building shall be erected within a subdivision without written permission from the Board. The Board reserves the right to rescind prior permission to build for cause.

F. Separability

If any section, paragraph, sentence, clause or provision of these regulations shall be adjudged not valid, the adjudication shall apply only to the material so adjudged, and the remainder of these regulations shall be deemed valid and effective.

G. Amendments

These regulations or any portion thereof may be amended, supplemented or repealed from time to time by the Board after a public hearing on its own motion or by petition.

H. Common Driveways – (Adopted 1/7/99)

1. Common driveways shall meet the following standards:
 - a. Minimum width: paved width of eighteen (18) feet and an easement width of twenty-four (24) feet. The paved surface shall consist of a 2-inch binder, a 1-inch top and a 12-inch gravel base.
 - b. Maximum grade: eight percent (8%), and within fifty (50) feet of the street line, six percent (6%).
 - c. Curb cut: not closer than one-hundred (100) feet from the centerline intersections of any right-of-way.
 - d. Minimum centerline radius: sixty (60) feet
 - e. The minimum sight distance for a driveway entering onto a roadway shall be a minimum of two hundred (200) feet in each direction.
 - f. The Planning Board may approve a common driveway to serve more than one (1) lot. In no case shall more than three (3) lots be serviced by one (1) common driveway.
 - g. The maximum length of a common driveway shall not exceed three hundred (300) feet.
2. The design of common driveways shall assure adequate safety for emergency vehicles, water service, if available, including hydrants, and adequate drainage of surface waters and provision for turnaround for use in all seasons by emergency vehicles.
3. A declaration of covenants, easements and restrictions for the use and maintenance of said common drives may be required by the Board and shall include arrangements satisfactory to the Board concerning: roadway maintenance, snowplowing, rubbish collection and potential future use as a public way.
4. For all common driveways, the rate of a post-development runoff shall not exceed the rate of predevelopment runoff. The Town Engineer and the Planning Board must approve the drainage system.
5. No occupancy permit for a residence to be served by a common driveway shall be issued until the Planning Board certifies in writing that the common driveway has been completed in accordance with the standards of this section.
6. No common driveway may ever be used to satisfy zoning frontage requirements.

Adopted April 5, 1973

Shrewsbury Planning Board

John F. Mitchell, Chairman

Joseph Goldberg, Vice-Chairman

Carl W. Carlson, Clerk

Paul S. Morgan

Vernon C. Johnson, Jr.

APPENDIX A

FORMS

- Form A - Application for Endorsement of Plan Believed Not to Require Approval
- Form B - Application for Approval of a Preliminary Plan
- Form C - Application for Approval of Definitive Plan
- Form C-1 - Application for Approval of Modification
- Form C-2 - Application for Plan Rescission
- Form D - Designer's Certificate
- Form E - Certified List of Abutters
- Form F - Covenant Release (available in the Engineering Department)
- Form G - Conveyance of Easements and Utilities
- Form H - Inspection Form
- Form I - Application for Preliminary Cluster Subdivision
- Form J - Application for Cluster Subdivision Special Permit
- Form K - Subdivision Waiver Request
- Application for Site Plan Approval/Special Permit/Modification
- Certificate of Ownership Form
- Decision Deadline Extension

APPENDIX B

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